Predictive Policing and Burglary Research

➤ Predictive and forecasting techniques allow for police strategies that are **more proactive than reactive**. Much like the weather forecast affords **better planning and preparedness** with one's resources, so too can predictive policing assist departments in these stages.

➤ Groff and LaVigne (2002) discuss how predictive crime mapping can **aid in anticipating areas of displacement** to overcome the crime prevention strategy criticism that crime is just displaced and will move right around the corner.

➤ Identifying attractive crime targets, followed up with intervention at broader geographical areas or resources allocated to highly visible targets, give the impression the intervention is more widespread than it is in actuality (Groff & LaVigne, 2002).

➤ Crime prevention tactics vary for different temporal scales, but the **deployment of patrols should be influenced by an awareness of recent crime** (Gorr el al., 2003; McLaughlin et al., 2007).

➤ Effective crime reduction requires an understanding of crime risk over different temporal scales.

   ○ More **general strategic priorities** for crime reduction may be informed by an awareness of **long-term hotspots of crime**.

   ○ **Day-to-day deployment** of resources requires a more precise understanding of **where it is most likely to happen in the next few days** (Bowers, Johnson, & Pease, 2004).

➤ Crime maps that forecast where **spatial patterns** of crime might occur should make the forecasts more sensitive to **temporal patterns** to **enhance the prediction accuracy** (Johnson, Bernasco, et al., 2007; Tompson & Townsley, 2010).

➤ **Routine activities vary by day, as do crime rates and crime risks** (Felson & Poulson, 2003; Ratcliffe, 2002).

➤ Results suggest that up to **4-7.5% of burglaries** might reasonably be **prevented or detected** with the inclusion of the short-term focus (McLaughlin et al., 2007, p.108).

➤ The majority of **burglaries occur during the day when people are at work** which causes delays in the reporting of the incident (Andresen & Jenion, 2004; Brantingham & Brantingham, 1984b; Cohen & Felson, 1979).

   ○ With **each minute reduction in police response time for a burglary, the odds of arrest increased** (Coupe & Blake, 2005).

   ○ Additionally, the apprehension of offenders in the act of burglary is **less time-consuming** than detecting them after the offenders have left the crime scene (Coupe & Griffiths, 1996; McLaughlin et al., 2007).

   ○ Being at least near the right place at the right time can increase the apprehension rate, even if the police are responding to the burglary and not detecting the burglary as it occurs.

➤ **Targeting smaller micro-places**, such as cells and street segments, is an **efficient method** of policing rather than focusing on offenders (Weisburd, Bushway, Lum, & Yang, 2004; Weisburd, Morris, & Groff, 2009).

➤ This is established from past research finding that **crimes cluster in space** (Sherman, Gartin, & Buerger, 1989), but time is just as important as space for crime concentration.

- Further research has established that **risk clusters in space and time** (Johnson & Bowers, 2004a; Townsley, et al., 2003).

- This **pattern of spatio-temporal clustering** has significant implications for patrol activity that **promotes detection and intervention** of crimes in progress (Johnson, Bernasco, et al., 2007).
  - Research has repeatedly demonstrated that **offenders prefer to return to a location associated with a high chance of success instead of choosing random targets** (Pease, 1998).
  - **Repeat victimization** may be said to be a special case of space-time clustering with **events tending to occur swiftly at the same locations** (Johnson, Summers, et al., 2009).
  - Johnson, Bowers et al., (2009) restated that a **small portion of victims (4%) account for a large portion of crime (44%)** (Pease, 1998); and where repeat victimization does occur, it does so quickly, offering a **narrow window for intervention** (Johnson et al., 1997).
  - The consequence is spatio-temporal instability in crime risk at the micro level of analysis across space.

- **Spatial and temporal patterns of burglary are fluid**.
  - When a **burglary occurs at one home, another is likely to occur immediately nearby** (Bowers, Johnson, Pease, 2004; Johnson & Bowers, 2004a).
  - As time elapses, this **risk decays so that after four to eight weeks**, **homes located near to a previously victimized home experience only a level of risk normal** for the area in which they are located (Johnson & Bowers, 2004a; Johnson, Bernasco et al., 2007).

- **Hotspots of burglary are considered "slippery"** (Johnson & Bowers, 2004b).
  - A prominent explanation links the movement to **animal foraging-like behavior** committed by offenders to **yield high gains, while eluding detection** (Bernasco, 2009; Johnson, Summers et al., 2009, Johnson et al., 2008).
  - The aim of the foraging burglar is to **increase his resources, while limiting the amount of energy expended and the associated risks**.
  - The **forager operates under spatial and temporal constraints**. **Potential targets are likely to be clustered in space.** Targeting homes near those previously burgled could lead to a drift in the places targeted.
  - No drift would occur if the offender chose to commit crimes in the same area over time, but such a strategy is likely to be suboptimal for there will be a limited population of targets, and **resources would eventually be depleted if the offender did not move** (Johnson, Summers, et al., 2009).
  - There may be an **increased risk of identification over time**, which is something that ethnographic research consistently identifies as a fear expressed by offenders, while continued offending in the same area is eventually likely to attract police attention even in the absence of any change in the vigilance of residents (Wright & Decker, 1994; Cromwell & Olson, 2006).

- The shift in location can be further evidenced by **police officer perceptions of burglary hotspots**.
  - McLaughlin et al (2007) studied police officer perceptions of burglary hotspots and found that about **60% of officer responses were accurate in determining hotspots over the last year**.
  - **Officers' responses were far less accurate (about 20%) in determining burglary hotspots for the previous two-week time period**. The reduction in accuracy creates a need for additional analysis with a short-term focus.